for fish by the State Water Resources Control Board (SWRCB) is too low. The standard set ten years ago for future springtime migrations of juvenile salmon through the Delta was miscalculated by more than 50%. The SWRCB must allocate adequate stream flow for the Sacramento River's fall run king salmon. These fish are the mainstay of the state's fisheries; without adequate flows, the resource will collapse!

## Hatcheries need work

Presently, the basin's four state and federal salmon and steelhead hatcheries are sustaining the Sacramento's fishery resource. Together, they produce 44 million fingerlings, sub-yearling- and yearling-sized fish. With proper maintenance and modest improvements, their production could be increased to 74 million fish.

Of the four facilities, the most in need is the Coleman National Fish Hatchery. It was built to offset the loss of natural salmon and steelhead habitat to the construction of Shasta and Keswick dams by the U.S. Bureau of Reclamation. However, throughout its 43-year history, it has produced only one-third (33%) of the fish the Bureau is obligated to replace. Several million dollars are needed for restoration but have not been provided by the Department of Interior. It has also succeeded in transferring responsibility for the hatchery to the U.S. Fish and Wildlife Service: the Services plea for funds has yielded meager results.

## The Solutions

ACTION: The U.S. Army Corps of Engineers rip-rapping scheme should be abandoned; zoning should be adopted to set development back from the river edge so that natural channel changes may continue to occur.

NOTE: Many recommendations concerning the Sacramento River are presented in Section One.

## Marin, Sonoma, and Mendocino Coastal Streams

The Setting

The streams of California's north central coast, from the Golden Gate north through Mendocino County, tend to be short and steep. Only a few—Lagunitas Creek and the Russian, Gualala. Garcia, Navarro,

Albion, Big and Noyo rivers—have extensive estuaries. Nearly all of the streams have year-round flow which, if water temperatures were cooler, could still produce silver salmon and steelhead trout at near-historic levels.

## **The Problems**

This entire region has been logged repeat

Logging debris blocks spawning runs in some Mendocino County streams.



PHOTO: THE CENTER FOR EDUCATION AND MANPOWER RESOURCES